

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

1. (Currently Amended) Apparatus for obtaining endoluminal access, the apparatus comprising:

a flexible elongate body having a working axis and a distal region, the elongate body configured for insertion within a body lumen; [[and]]

at least one working lumen within the flexible elongate body;

at least one articulating element disposed near or at the distal region of the elongate body, wherein the articulating element is configured to articulate from an in-line position to an off-axis position relative to the working axis of the elongate body.

2. (Original) The apparatus of claim 1, wherein the articulating element comprises a visualization element configured to image within a body lumen.

3. (Currently Amended) The apparatus of claim 1, wherein the articulating element comprises the distal region of [[a]] the working lumen extending through the elongate body.

4. (Original) The apparatus of claim 1, wherein the apparatus has a delivery configuration in which the articulating element is aligned with or adjacent to the working axis of the elongate body, and a deployed configuration wherein the articulating element is articulated off-axis from the working axis of the elongate body.

5. (Original) The apparatus of claim 1, wherein the articulating element further comprises at least two articulating elements.

6. (Original) The apparatus of claim 5, wherein the at least two articulating elements are configured for independent off-axis articulation.

7. (Original) The apparatus of claim 5, wherein the at least two articulating elements are configured for coordinated off-axis articulation.

8. (Original) The apparatus of claim 3, wherein the at least two articulating elements comprise at least two visualization elements configured to provide stereoscopic visualization.

9. (Original) The apparatus of claim 8, wherein a focal depth of the at least two visualization elements may be altered by altering a relative angle between the at least two visualization elements.

10-15 (Cancelled).

16. (Currently Amended) The apparatus of claim ~~[[15]]~~ 4, wherein off-axis articulation of the articulating element is configured to expose a distal opening of the working lumen.

17. (Currently Amended) The apparatus of claim 4, ~~wherein the elongate body further defines a lumen, and~~ wherein a distal opening of the working lumen is exposed in the deployed configuration.

18. (Original) The apparatus of claim 17, wherein the distal opening is covered by the articulating element in the delivery configuration.

19. (Currently Amended) The apparatus of claim 1 further comprising a visualization element and wherein off-axis articulation of the articulating element is configured to expose the visualization element.

20- 22. (Cancelled).

23. (Original) The apparatus of claim 1 further comprising a housing configured to couple the articulating element to the elongate body and to facilitate articulation of the articulating element.

24. (Currently Amended) The apparatus of claim [[23,]] 1 wherein the housing comprises at least one linkage for articulating the articulating element is supported on the body by a pair pivoting links.

25. (Cancelled).

26. (Original) The apparatus of claim 1, wherein the elongate body is steerable.

27. (Original) The apparatus of claim 1, wherein the elongate body is rigidizable.

28. (Original) The apparatus of claim 1, wherein the articulating element further comprises a steerable shaft.

29. (Original) The apparatus of claim 1, wherein the articulating element further comprises a diagnostic or therapeutic tool.

30. (Original) The apparatus of claim 1 further comprising an atraumatic tip.

31. (Currently Amended) A method for obtaining endoluminal access, the method comprising:

advancing an elongate body having [[an]] at least one articulatable element disposed near or at a distal region thereof into a body lumen; and

~~articulating~~ pivoting the articulatable element in a pre-defined arc from a position in-line with or adjacent to a working axis of the elongate body to a position out-of-line with the working axis.

32. (Original) The method of claim 31, further comprising imaging within the body lumen with a visualization element disposed within or upon the articulatable element.

33. (Original) The method of claim 32, wherein imaging further comprises imaging stereoscopically.

34. (Currently Amended) The method of claim 31, wherein articulating the articulatable element comprises exposing a distal opening of at least one working lumen defined within the elongate body.

35. (Currently Amended) The method of claim 34 further comprising advancing a tool through the working lumen.

36. (Currently Amended) The method of claim 34 further comprising injecting or withdrawing a fluid through the working lumen.

37. (Currently Amended) The method of claim 31, wherein articulating the articulatable element further comprises expanding the articulatable element from a reduced delivery configuration to an expanded deployed configuration, and with the articulatable element in a fixed position relative to the body when the articulatable element is in the expanded deployed configuration.

38. (Currently Amended) The method of claim 31 further comprising repositioning the articulating element in-line with or adjacent to the working axis of the elongate body, at a position in front of the elongate body.

39. (Cancelled).

40. (Original) The method of claim 38 further comprising manipulating the elongate body and re-articulating the articulatable element out-of-line with the working axis.

41. (Original) The method of claim 33, further comprising altering a focal depth during stereoscopic imaging.

42. (Original) The method of claim 31 further comprising steering the elongate body within the body lumen.

43. (Original) The method of claim 31 further comprising rigidizing the elongate body within the body lumen.

44-50. (Cancelled)

51. (New) Apparatus comprising:
a flexible body adapted for insertion into a body lumen of a patient;
at least one link pivotably attached adjacent to a front end of the body;
at least one tool pivotably supported on the link; and
a member attached to the tool or the link and extending towards a back end of the body, for moving the tool relative to the body.

52. (New) The apparatus of claim 51 further comprising at least one working lumen in the body.

53. (New) The apparatus of claim 51 comprising first and second links pivotably attached to the tool.

54. (New) The apparatus of claim 53 wherein the first and second links are substantially parallel.

55. (New) The apparatus of claim 51 wherein the tool comprises a diagnostic tool, a therapeutic tool, a visualization element, or an imaging element.

56. (New) The apparatus of claim 52 wherein the tool is moveable in an arc from a first position adjacent to the body, to a second position spaced apart from the body.

57. (New) The apparatus of claim 56 wherein the tool is substantially aligned with the working lumen when the tool is in the first position.

58. (New) The apparatus of claim 56 wherein the tool has a front end, and the body has a front end, and wherein the front end of the tool is forward of the front end of the body, when the tool is in the first position and when the tool is in the second position.

59. (New) The apparatus of claim 51 comprising a first tool attached to a first side of the body via a first pair of links, and a second tool attached to a second the body, substantially opposite from the first side of the body, via a second pair of links.

60. (New) Apparatus comprising:

a flexible body adapted for insertion into the body of a patient;

at least one working lumen extending through the flexible body;

at least one tool pivotably supported on the body, adjacent to a front end of the body; and

with the tool moveable between a fixed inward position and a fixed outward position.

61. (New) The apparatus of claim 1 comprising at least two working lumens, and with one or more of the working lumens comprising an insufflation lumen.

62. (New) The apparatus of claim 34 comprising two or more working lumens with at least one of the working lumens comprising an insufflation lumen.

63. (New) The apparatus of claim 52 comprising at least one insufflation lumen extending through the flexible body.

64. (New) The apparatus of claim 60 comprising at least one insufflation lumen extending through the flexible body.